NOTE XXII.

FAUNA SIMALURENSIS. LEPIDOPTERA RHOPALOCERA, FAM. PIERIDAE.

BY

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(With 2 textfigures).

The Leyden Museum of Natural History received a small number of Pieridae from the islands Pulu Babi and Simalur, collected by Mr. Edw. Jacobson. Mentioning eight species only, I call attention to the importance of this small collection, because two species prooved to be new and three other ones were represented by most interesting varieties. Especially the islet Pulu Babi seems to possess a remarkable fauna, deviating from that of the neighbouring islands. Pulu Babi is a coral-islet, totally overgrown with a dense, by people little visited forest.

The following is an enumeration of the species received, with description of the novelties.

1. *Leptosia xiphia* Fabr. nov. var. *micropunctata.* ♂ & ♀. Nos 4316 and 4317.

Hab. Pulu Babi.

Exp. alar. of the male 34 mM., that of the female 40 mM. The colour and external morphological structure is quite like that of *L. chlorographa* Hübn., but the pattern is different. The apical black spot is very localised round the apex of the anterior wing and rectangular; the subapical spot is vanished in the female and hardly visible in the male; in both sexes the spot is very small. The subspecies *malayana* Fruhst. will resemble the most the described variety of Pulu Babi.

2. *Saletara panda* Godt. var. *Schönbergi* Semp. ♂. No. 4318.

Hab. Sinabang (Simalur).

The first *panda Schönbergi* is described from the island Nias and is looked upon as a local variety from that island. In our collections are several specimens from Nias.

Saletara panda Godt. nov. var. *substriata.* ♀. No 4319.

Hab. Pulu Babi.

Exp. alar. 50 mM. The external morphological characteristics are those of *S. panda* Godt., but the pattern is quite different. The pattern of a real *panda* is dispersed into a brown stripe along the costa, a dusty brown spot near the base of the anterior wing and some other ones near the apex and outer-margin. So the inner-outline of the pattern is not distinctly drawn. On the hind-wings no black margin is visible, only some brown scales near the outer-margin represent the band of the female *panda.* On the underside of the wings no pattern is to be seen.

The female specimen I received, is damaged, but the left side is in a good state.

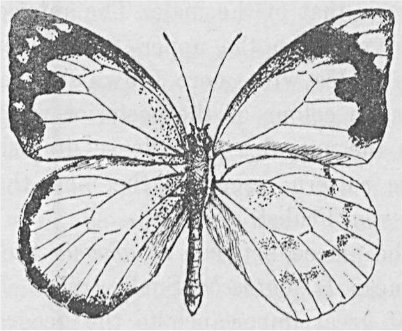
It is also possible that we have to do with a colour aberration, as I have seen only one specimen.

3. *Appias inanis*, nov. spec. ♂. No. 4315.

Hab. Pulu Babi.

Exp. alar. 47 mM. The habitus is that of *A. leptis* Feld. from Java; the pattern resembles that of Fruhstorfer's subspecies *vadus* from Lombok, yet there are characteristics which I think to be specific. It is a pity that again only one specimen has been collected.

As far as I could see with a loupe without cutting off the genitalia, the external form is different, the valvae being more rectangular. The two bushes of hairs are planted in more ventrally. These differences are pointing out a probable modification of the copulatory-apparatus. The posterior wings are larger than those of *leptis* and last not least the black pattern is quite different. On the upperside of the anterior wing the apical black spot is smaller and interrupted by six distinct white spots between the nerves. The textfigure will show the pattern more distinctly. On the upperside the posterior wings possess a black margin, which is interrupted by very small white lines. On the underside the subapical black band is narrower and more strongly curved inwards than in *leptis*. The posterior wings bear a pattern like that of *A. lucasi* Wall., but the prime-colour is not brownish, but pale-yellow, and the zig-zag line near the outer-margin is more vanished. Also the pale-brown spots near the base are not distinct.



Appias inanis, n. sp. ♂.

This species ought to be inserted between *A. lucasi* Wall. and *A. leptis* Feld., both from Java.

4. *Huphina vaga*, nov. spec. 1 ♂ & 2 ♀. Nos 4320—4322.
Hab. Pulu Babi.

Exp. alar. 60 mM. At first sight one should think to have to do with a real *H. aspasia* Stoll. The posterior wings are orange-yellow, bordered with black, which colour is also present on the nervules near the outer-margin. On the upperside of the anterior wings we find the same pattern as in *aspasia*, but between the nervules the grayish white spots are more confused into stripes. Here the pattern resembles more that of *H. bathseba* Snell. The anterior wings possess on the underside once more the pattern of *aspasia*, only the white colour is dispersed. On the posterior wings the pattern of the outer-margin is half that of *aspasia*, half that of *H. selma* Weym., with more black squamae on the nervature.

The body is quite that of *H. aspasia* Stoll. So it was first doubtful to me, whether we had to do with a variety of *aspasia* or with a new species. The two female specimens however have decided my views, because they are quite different from those of *aspasia.*

The size of the females is that of the male. The anterior wings are more rounded with, on the upper- and underside, the pattern of the males with more brownish-black on the nervules. The orange colour of the posterior wings is nearly covered by, on the nervules more dense grayish-brown, squamae. So this pattern resembles the most that of *H. naomi* Wall. var. *aga* Fruhst.

This species ought to be placed between *H. aspasia* Stoll and *H. timnatha* Hew. near *H. bathseba* Snell.

This new species is of great importance to the geographical distribution of the *aspasia*-like butterflies. The real *aspasia* is known from the Philippines, Moluccas and from Waigeu. On Java *aspasia* is replaced by *H. judith* F.; on Bali, Lombok, Flores, Sumbawa and Sumba we find *H. naomi* Wall. Mr. Snellen described a species from the Kangean-islands, *H. bathseba*, which is smaller than *vaga*, but resembles this species the most. *H. timnatha* Hew. is the species from Celebes. From the island Nias we know *H. selma* Weym., which resembles *H. judith* F.

Later on I will publish figures of these remarkable varieties of Pulu Babi.

5. *Catopsilia crocale* Cr. ♀. No. 4323.

Hab. Lasikin (Simalur).

Catopsilia crocale Cr. var. *alcmeone* S. v. V. 4 ♂. Nos 4324—4327.

Hab. Sinabang (Simalur).

6. *Catopsilia chryseis* Drur. ♂. No. 4732.

Hab. Labuan Badjan (Simalur).

7. *Gandaca harina* Horsf. ♂. No. 4309.

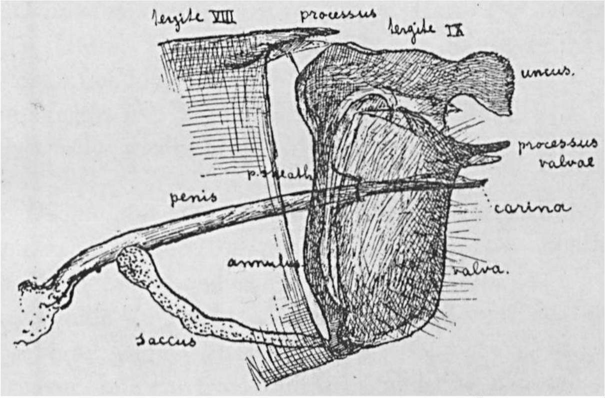
Hab. Sinabang (Simalur).

Gandaca harina Horsf. nov. var. *gilva*. 5 ♂. Nos 4310—4314.

Hab. Pulu Babi.

Exp. alar. 40 mM. The habitus is that of *harina*; the colour is yellow, without any pattern. On the apex are some brown squamae, being the last remnants of the characteristic apical and marginal black spot.

It is possible, that this form is an example of season dimorphism, but I do not think it in this matter. The islet Pulu Babi is totally overgrown with a very dense forest; according to the letters of Mr. Jacobson it was very rainy also in the east monsoon; the butterfly is captured in April. The differences of climate will be not important on these islands. Fruhstorfer knows a subspecies of Lombok, *austrosundana*, in which the black margin is absent in the east monsoon (Seitz, Faun. Indo-austr. p. 173).



Copulatory organ of the ♂ of *Gandaca harina* Horsf., nov. var. *gilva*.

Of one of the five males I have prepared the copulatory-apparatus and also that of the real *harina* of Java. In consequence of these researches I may write with certainty that *gilva* is a variety. The subspecies *samanga* Fruhst., *mindanaensis* Moore, *assamica* Moore, *elis* Fruhst. and *aigina* Fruhst. are, I think, also varieties of *harina*.

The females of this species, which are very badly represented in our collections, are always paler and often nearly white, with a black margin on the posterior wings or traces of it.

Two specimens from the Natuna-islands, males, likewise possess a small apical black margin. One specimen from Ceram, collected by Ludeking, shows a trace of the apical black margin.

The figure represents the male copulatory-organ of *G. gilva.*

8. *Terias hecabe* Linn. 5 ♂ & 2 ♀. Nos 4304—4308, 4339 and 4340.

Hab. Simalur, Pulu Babi and La Laut Besar.

Leyden Museum, November 1913.